Cartilage Research Project

C001 Adult rabbit Cartilage and Bone

11/19/91 fixed in 2.5 Glut in Cacodylate buffer 0.1M
12/05/91 transfer to 0.05M cacodylate buffer
03/11/00 transfer to H20
12/20/07 dist H20

12/26/07 put into white vinegar 5% - 1ml + H20 – 2ml
12/31/07 9:00am dist H20 cut into small pieces

C001 A & B

12/31/07 Papain-Cysteine @ rm temp 2pm
12/31/07 Adjust ph-7.4 temp @ 90F 3pm
12/31/07 No change 7pm
01/01/08 no change temp to 60C 9am
01/01/08 Some bone softe TM dark line 1pm
01/01/08 New mix P/C @60C ph-7.4 5pm
01/01/08 Spec dark with sep at TM. Little press with AC loose 7pm
01/02/08 Little change, adj ph-7.2
01/04/08 AC peels loose from CC surface, CC hard, H20 then dehydration

C001A

01/02/08 Cut into two pieces
01/03/08 Put into P/C ph7.8 @60 8am

C001A1

01/02/08 Put into 5% acid @ rm temp 3pm
01/03/08 P/C ph7.8 @60C 8am
01/04/08 AC loose with some CC attached, CC surface looks soft, dehydration

C001C

01/01/08 5% acid @ rm temp 9am
01/01/08 Bone soft, P/C @ 60C used 5pm
01/02/08 Visible TM dark line 3pm
01/04/08 AC peels loose from CC. Small area on CC shows white. Dehydration

C001D,E,F,G

01/02/08 5% acid 8am

C001D

01/03/08 P/C ph7.8 @60C 9am

01/03/08 TM separation
01/05/08 Bone soft with separation
01/05/08 AC loose with pull 2pm, 5% acid @60C
01/06/08 Bone soft 9am
01/09/08 Most of surface CC gone , Pot Perm then dehydration

C001D1

01/07/08 AC cut loose with CC under, Pot Perm , Dehydration

C001D2

01/07/08 Bone with ½ AC attached into 5% acid @60C 7pm
01/08/08 P/C @60C 8am
01/09/08 5% acid @60C 8am
01/10/08 P/C @60 8am
01/13/08 CC soft, milky look, P/C @60C 8am
01/14/08 AC small area attached 8am
01/14/08 Pot Perm, dehydration

C001E

01/02/08 5% acid @ rm temp
01/04/08 P/C used @ 60C 10am
01/05/08 Bone hard with separation TM line 8am
01/05/08 AC loose with pull 2pm
01/06/08 Bone hard, AC loose, CC hard. Dehydration

C001E1

01/06/08 Cut from E and put into 5% acid @60C 6pm
01/07/08 AC into dehydration and Bone into P/C @ 60C 8am
01/07/08 Bone soft with part of AC attached, CC separates with ½ attached to AC
01/07/08 Dissolved CC, exposed BV 2pm, continue P/C
01/07/08 Pot Perm 10min then dehydration 8pm

C001F

01/02/08 5% acid @ rm temp
01/10/08 P/C @60C ph8 5pm
01/11/08 Bone hard 8am
01/12/08 AC hard, Bone, CC soft, AC pulls loose
01/14/08 Bone soft with some loss 8am
01/16/08 5% acid
01/17/08 Bone soft, most gone tear apart 9am, dehydrate

C001G*

01/02/08 5% acid @ rm temp (16days)

01/18/08 P/C @60C 7pm
01/19/08 AC hard, definite TM line 8am. * Use sample for Photos of TM line
01/20/08 5% acid @ rm temp 6pm
01/21/08 P/C used@60C 2pm
01/22/08 New P/C 3:1 @60C 9am
01/23/08 Add new P/C 2:1 @60C 11am
01/24/08 AC pulls away from intact CC
01/24/08 AC into alcohol
01/24/08 Bone into LimeAway @ rm temp 2pm, @60C 4pm
01/24/08 P/C @60C 8pm
01/25/08 Into alcohol, dehydration

C001H

01/04/08 5% acid @60C 3pm
01/04/08 P/C ph7.6 @60C 6pm
01/05/08 CC has milky look 5pm
01/06/08 AC loose from CC 6pm
01/07/08 Bone hard, CC hard put into 5% acid 7pm
01/08/08 Bone soft, P/C @60C 8am
01/09/08 Bone hard, CC hard into 5% acid @ 60C 8am
01/10/08 P/C @ 60C 9am
01/13/08 1:1 acid , limeaway 8am
01/13/08 P/C 4pm
01/14/08 **CC layer all milky 8am
01/14/08 Pot Perm, dehydration 7pm

C001H1

01/06/08 Piece of Bone and AC cut from C001H, dehydration

C001H2

01/06/08 Bone and CC put into9 5% acid @ 60C 6pm
01/07/08 P/C @ 60C ph8 8am
01/07/08 Bone soft, CC milky breakdown, continue P/C 8pm
01/08/08 Pot Perm 5min, dehydration 8am

C001I

01/04/08 5% acid @ 60C 6pm
01/05/08 Bone hard, P/C used ph7.4 @ 60C
01/06/08 Small separation TM line but AC tight 9am
01/07/08 Bone hard, AC tight 8am
01/07/08 5% acid @60C 7pm
01/08/08 Some AC loose on edge, P/C @ 60C 8am
01/09/08 5% acid @60C 8am

Follow: COOIL, Bone digesting leaving AC intact with TM, CC layer attached
Continue P/c - 8pm 2/14/8

CD-SLAVE-BOTTOM
HL-DT-ST GCE-8400B

GeForce FX5200 DDR 256

01/10/08 P/C @ 60C 9am
01/11/08 Bone hard, CC hard, put into 50% LimeAway @ 60C 8am
01/12/08 CC soft, AC off 2pm
01/13/08 Dehydration

C001J

01/23/08 LimeAway(new) @rm temp 5pm
01/23/08 Rinse H20, P/C @ 60C 8am
01/23/08 AC most gone CC and Bone intact 2pm

C002 Adult Rabbit (Bun Bun) 71/2 yr old

02/20/93 2% Paraformaldehyde in 0.1M cacodylate buffer
05/27/93 0.1M cacodylate buffer

C002A

01/06/08 5% acid @ 60C 8pm
01/07/08 P/C used ph7.4 @ 60C 9am
01/08/08 5% acid @ 60C 7am
01/09/08 P/C @ 60C 5pm
01/09/08 Looks like AC surface being digested 7pm

C002A1

01/09/08 Piece cut from C002A with thin layer AC coming off,dehydration

C002A2

01/09/08 Piece form C002A put into Pot Perm, dehydration

C002A3

01/09/08 P/C @ 60C 9pm
01/10/08 5% acid @ 60C
01/12/08 3 pieces Bone soft, AC gone or disintegrating, Pot Perm 15min 2pm

C003 Adult Rabbit form C001

01/10/08 5% acid @ rm temp 6pm

C003A

01/10/08 5% acid @ 60C 9am
01/11/08 P/C @ 60C 9am
01/14/08 AC, Bone hard put into 5% acid 1:1 LimeAway @ 60C 8am
01/14/08 P/C @ 60C used 5pm
01/16/08 5% acid @60C 9am
01/17/08 P/C @ 60C 9am

C001L - AC seperation @60 2/6/8 8AM
C001O - Bone firm * CC layer turning white 8AM 2/6/8
C001N - Bone hard, AC disintegrating 8AM 2/6/8
C007A3 - Most Bone gone, thin AC layer 4pm 2/9/8
C006A - AC/Bone Digested (New P/C) - Formalin 11pm 2/9/8
C001L - New P/c (AM) Rapid Digest - Rm temp - 11pm
C001N - " " " " "
C003C - " " " " "
C001O - " " " " "
C001N - AC loose, cc layer loose, Formalin 7pm 2/10/8
C001O - AC off, all digesting - Formalin " "
C003C - CC layer intact, cut into 2 pieces
C003Ca - continue in papain @ rm temp & 11
C003C - Put into Formalin
C003Ca - AC separated, most digested 12 noon 1/12
C003D - No change - 5% acid @ 60C - 8pm 2/14/8

After Papain:
1) Use Lime Away to remove residue
2) Use EDTA buffered to reduce residue
3) Sulfuric, Nitric, HCl
4) Dilute Bleach

C001L
C003D
C002B — 5% Acid @ rm temp 10pm 2/13/8

01/10/08 Bone soft and disintegrating, expose soft CC, dehydrate 10am

C003B

01/21/08 P/C used@60C 12pm
01/22/08 LimeAway @60C 12:20pm
01/22/08 P/C new from C001G @60C 5pm
01/23/08 LimeAway @60C 11am

C004 Adult Rabbit from C001

01/10/08 1 hr LimeAway @ rm temp
01/10/08 Overnite in P/C @ 60C, Bone is a little soft
01/11/08 5% acid @ 60C 9am
01/11/08 P/C @ 60C 9pm

C004A

01/13/08 AC hard, Bone soft with TM line visible, no separation 7am
01/13/08 5% acid 1:1 LimeAway @ 60C 4pm
01/14/08 P/C @ 60C
01/16/08 5% acid @ 60C 9am
01/17/08 P/C @ 60C , **disintegrated** 9am

C004B

01/10/08 LimeAway 1hr rm temp
01/13/08 5% acid @ rm temp 4pm
01/17/08 P/C @ 60C
01/18/08 AC pulled loose with milky CC on edges , continue P/C 10am
01/19/08 continue P/C, adj ph7.6 9am
01/19/08 AC loose from CC which is starting to change to white 4pm
01/20/08 AC into Formalin, Bone with CC into 5% acid @ rm temp
01/21/08 Bone into P/C@60C 12pm
01/21/08 AC in formalin then ETOH and dehydration
01/22/08 P/C new from C001G @60C 5pm
01/23/08 CC layer intact, bone digesting, new P/C @60C 11am

C004C

01/10/08 LimeAway 1hr @ rm temp
01/13/08 5% acid @ rm temp 4pm
01/18/08 P/C @ 60C 7pm
01/19/08 continue P/C ph7.8 9am
01/19/08 AC, Bone firm with TM line
01/20/08 5% acid @ 60C 6pm
01/21/08 P/C used@60C 12pm
01/22/08 P/C new from C001G @60C 5pm
01/23/08 LimeAway @60C 11am

C005E – Oven malfunction – found at 180F 7pm 2/3/8
AC gone, CC surface appears clean – Formalin

C005C – AS C005E – AC tearing loose from bone
Oven MF put into P/C from C005E @ rm temp 7pm 2/3/8

C005D – AC 'see through' Bone soft, intact –
Oven MF P/C from C005E @ rm temp 7pm 2/3/8
@ 60C NOON 2/4/8

C003D P/C from C005E @ rm temp 7pm 2/3/8
Oven MF AC hard, intact, Bone hard – P/C @ 60 NOON 2/4/8

C001N AC, Bone hard – P/C from C005E @ rm temp 2/3/8 7pm
Oven MF

C0010 AC intact, Bone soft, P/C from C005E @ rm temp 7pm 2/3/8
Oven MF P/C @ 60 NOON 2/4/8

C001M AC intad, Bone soft, New P/C 2:1 7pm 2/3/8
OvenMF

C003C AC intact, Bone soft, New P/C 2:1 8pm 2/3/8
Oven MF

C001L – PUT INTO 60C 4pm 2/4/8
BONE Soft

C006A – Used P/C @ 60C 4pm 2/4/8

C007A3 – Used P/C @ 60C 4pm 2/4/8

C003D – used P/C @ 60C 11AM 2/5/8

C005D – AC/Bone digesting – Add used P/C @ 60C 11AM 2/5/8

C005C – AC peeling from Bone – Add used P/C @ 60C 11AM 2/5/8

C001L – Add new P/C – 11AM 2/5/8

C001M* – AC loose from CC – Formalin 11AM 2/5/8

C007A3 – New P/C @ 60C AC/BONE HARD 11AM 2/5/8

C006A – No change – Used P/C @ 60C 11AM 2/5/8

C005D – AC loose from CC, Rinse – FORMALIN 7pm 2/5/8

C005C – AC coming loose from Bone – Formalin

C004D

01/10/08 LimeAway overnite @ rm temp
01/11/08 P/C @ 60C
01/14/08 AC layer off, CC layer milky 8am, Pot Perm, dehydrate

C005 Racoon from 02 with formalin fix

01/18/08 From H20 into 5% acid @ rm temp

C005A

01/14/08 P/C used pH8 8pm
01/15/08 5% acid @ 60C 12pm
01/16/08 P/C @ 60C 9am
01/17/08 AC soft, Bone soft and CC milky color 8am
01/18/08 Most disintegrated , dehydrate 10am

C005B

01/24/08 From C005, rinse H20 then new P/C 1:1 @ rm temp 8pm
01/25/08 No change, P/C @ 60C 9am

C006 Deer from 02 in formalin

01/15/08 Pieces put into H20

C006A

01/15/08 P/C @ 60C 8am
01/18/08 5% acid @ rm temp 7pm

C006A1

01/16/08 Pot Perm until dark 8am

C007A Rabbit unknown sample

01/15/08 5% acid 1:1 LimeAway @ 60C 1pm
01/15/08 5% acid 7pm
01/15/08 Pot Perm stained thin layer then cut into small pieces store in H20
01/18/08 5% acid @ rm temp 6pm

C007A1***

01/16/08 Sample taken before staining with Pot Perm, P/C @ 60C 8am
01/16/08 Put into Pot Perm 20min then cut into 2 pieces

C003B } Rinse H2O, Dilute Adj NaOH EDTA @ rm temp pH 8 8AM 1/31/8
~~C001K~~ } FORMALIN 8AM 2/1/8

C001M P/C/B – Papain 5
Cysteine 3
3% Sod. Borate 5
} @ 60C 8AM 1/31/8

C001N - AS C001M @ rm temp 8AM 1/31/8

C003D - AS C001M @ 60C 8AM 1/31/8 NC change 2/1/8 8AM

C005E [AS C001M @ 60C 8AM 1/31/8
[~~NO change~~, bone soft 8AM 2/1/8

~~C001K – Formalin 9pm 1/31/8~~

C001M – No change, Bone hard 8AM 2/1/8

C003C – No change, Bone hard 8AM 2/1/8
[EDTA Adj pH & @ 60C 8AM 2/1/8
[Bone Soft 9pm 2/2/8

C001M
5 days 5% acid rm temp
H2O store
P/C/B @ 60C 24 hr. –
No change
*TRY EDTA @ 60C
EDTA @ 60 NO PH Adj 8AM 2/1/8

C001N – Some digesting of marrow, bone, AC hard 8AM 2/1/8

C001O – From C001, 5% Acid 1 : EDTA @ 60-2pm 2/1/8

C005C, ~~D~~ – EDTA @ 60, 2pm 2/1/8 – No change before

C005D – P/C + EDTA ?? bone soft 8pm 2/2/8

C005C – P/C used @ 60C 8pm 2/2/8

C005E – New P/C (2:1) @ 60C 8pm 2/2/8

C001M – pH was 8, probably not EDTA no adj?
change to new EDTA @ 60C 9pm 2/2/8

C001N – Put into 60C 9pm 2/2/8

01/18/08 AC hard, some bne loss, **CC layer appears milky and disintegrating 6pm
01/19/08 AC soft and disappearing 9am
01/19/08 AC loose from CC layer which looks muschy with milky color, CC intact
01/19/08 CC layer intact but loose, fix with formalin then add alcohol 4pm

C007A1a

01/16/08 5% acid @ 60C 9am
01/17/08 P/C @ 60C 9am
01/18/08 **Disintegrated 10am

C007A1b

01/16/08 Papain @ 60C 9am
01/19/08 5% acid @ rm temp
01/21/08 P/C used@60C 12pm
01/22/08 Bone digesting 2pm
01/22/08 New P/C from C001G 5pm
01/22/08 AC, Bone digesting rm temp rm temp 9pm
01/22/08 Put into P/C @60C 10am
01/24/08 Disintegrated after new P/C 2pm
01/24/08 Remains of specimen spin down and fix in Formalin, dehydration 9pm

C008 Cow AC and Bone from front leg joint

01/17/08 Put into formalin

C008A

01/17/08 P/C new pH8 @ 60C 3pm
01/19/08 5% acid @ rm temp 9am
01/21/08 P/C used@60C 12pm
01/21/08 Bone gone, AC detached from CC most digested 7pm
01/22/08 **Box #1 – 7(2)

C008B

01/17/08 Papain *ONLY* ph7.6 3pm
01/19/08 P/C used @ 60C 9am
01/20/08 5% acid @ rm temp 9am AC hard, Bone little soft
01/21/08 5% acid 1:1 Limeaway 3pm
01/21/08 10% Limeaway – 20min, rinse H20 P/C used@60C 4:30, AC detached
01/22/08 ** Box #1 – 7(3,4)

C005B - LimeAway 25 Drops / small vial @ 60C 9AM 1/26/8
C007A2 - 5% Acid : + 25 drops LimeAway @ 60C 9AM 1/26/8
~~C001K - 5% Acid + 25 drops LimeAway @ 60C 9AM 1/26/8~~
C001J - Dehydration 1/25/8
C003C - P/C used @ 60C 10AM 1/26/8
C007A2 - AC loose from Bone - Formalin 5pm 1/27/8
C004C - Layer AC loose from CC - P/C @ 60C 5pm 1/27/8
C003B - AC mostly gone - P/C @ 60 5pm 1/27/8
C003C - AC intact Bone hard - P/C @ 60C 5pm 1/27/8
C005B - AC gone, CC mostly digested - formalin
C006A - 5% acid + 25 drops LimeAway @ rm temp 5pm 1/27
C005C,D - 5% acid + 25 drops LimeAway @ rm temp 6pm 1/27
C007A3 - 5% Acid + 25 drops LimeAway @ rm temp 6pm 1/27/8
~~Bone & AC dissolved leaving thin CC layer? 8AM 1/28/8~~
C005C,D - No change 8am 1/28/8
C006A - No change 8am 1/28/8
~~C001K * PHOTO AC peels loose (without pulling) 9am 1/28/8~~
C004C - AC almost loose & gone, CC white - formalin
C-003C - No change 9am 1/28/8
C-003B - Most AC gone, CC opaque to SC Bone 9am 1/28/8
~~C001K - P/C @ rm temp 10AM 1/28/8~~
~~@ 60C 3pm~~
C003C - 2.5% Acid @ 60C 9pm 1/29/8
EDTA Adj pH 7.2 NaOH 9pm 1/30/8
C001L - EDTA SAT SOLN. NO pH Adj - rm temp 9pm 1/30/8
Bone/CC like rubber 9pm 2/2/8
C003C - P/C used @ 60C 8AM 1/31/8

Cartilage Samples Box #1

1:	1 - C001H	CC,Bone
	2 - C001D	AC
	3 – C004D	Bone
	4 – C001D1	AC
2:	1 – C001I	AC
	2 – C001I	Small Bone
	3 – C001I	Large Bone
3:	1 – C001H2	Bone
	2 – C001F	Bone, AC Ligament
4:	1 – C001E	
	2 – C001E1a	
	3 – C001E1b	
5:	1 – C001D2	AC, Bone
6:	1 – C002A3	
	2 – C002A3	
	3 – C002A3	
	4 – C005A	
7:	1 – C004AC	
8:	1 – C001G	Bone
	2 – C004B	Bone

9: 1 - C001J - 1/2 sample growth plate
2 - C001J - Bone and CC
3 - C001G - AC
4 - C001G - Ligament

10: 1 - C001N - Bone/AC loose

11: 2 - C006A - 4 pieces, digested Bone/AC
3 - C003C -
4 - C007A3 - CC/some bone on side

12: 1 - C003Ca - Bone + small piece AC
2 - C001O - Bone/AC on end
3 - C003A - " " "
4 - C007A2 - Bone separate (AC + CC separate)
5 - C007A1 - Bone + CC separate - AC separate